ABSTRACT

    A fracture prediction device for a spot welded
portion includes: an input means inputting all or any
of a material strength, a plate thickness, a nugget
diameter of a spot welding, a plate width of a joint,
and a rotation angle of the joint in a tension test,
based on a cross tension test and/or a shear tension
test at a spot welded joint; a calculation means
calculating a fracture strength parameter of the spot
welded portion from all or any of the material
strength, the plate thickness, the nugget diameter of
the spot welding, the plate width of the joint, and
the rotation angle of the joint in the tension test;
a parameter storage means storing the fracture
strength parameter by each steel type; and a
calculation means judging a fracture of the spot
welded portion by installing the fracture strength
parameter stored in the parameter storage means into
a fracture prediction formula in which a deformation
at a periphery of the spot welding is modeled by a
finite element method.